REVISED OCTOBER 5, 2007

REQUEST FOR QUALIFICATIONS (RFQ) & EXPRESSIONS OF INTEREST CONSULTING SERVICES

(29 Del.C. §6981)

Agreement No. 1439

FARE COLLECTION SERVICES

10/5/07 REVISED RFQ
Phase 3 has been changed from 'Assignment and Piggyback Initiation' to 'Farebox System Procurement' on Page 1 and Page 9.

PROJECT DESCRIPTION

The purpose of this procurement is to obtain consultant services to assist the Delaware Department of Transportation's (DelDOT) Delaware Transit Corporation (DTC) throughout its fare collection system upgrade. Project compensation will be handled on a cost-plus fixed-fee basis.

This upgrade will be conducted in four phases:

Phase 1- Needs Analysis
Phase 2- Implementation Plan
Phase 3- Farebox System Procurement
Phase 4- Oversight and Compliance

The anticipated schedule for these upgrades is listed as follows:

Phases 1 & 2	Dec. 2007 – April 2008
Phase 3 –	May 2008 – July 2008
Phase 4 –	Aug. 2008 – Dec. 2009 (Jan-Dec 2009 warranty period)
Beyond Phase 4 -	On an on-call hourly basis from Jan. 2010 – Dec. 2011

CONSULTANT SERVICES REQUIRED

See attached Scope of Work.

SUBMISSION REQUIREMENTS

1. **Expression of Interest submissions** must be received by: **3:00 P.M. Local Time, Wednesday, October 24, 2007**.

   Facsimile responses to this Request for Expressions of Interest are not acceptable. No response hand-delivered or otherwise will be accepted after the above date and time. Expressions of Interest arriving after the deadline will be rejected regardless of the reason for late arrival. DelDOT's time is considered the official time for determining the cut-off for accepting Expression of Interest submissions. Firms wishing to be considered for work on this project must submit statements expressing interest as set forth herein. Any variation, including additions, is considered a basis for rejection. Expressions of Interest are to be mailed or delivered to:

   James Hoagland
   Consultant Control Coordinator

Contract Administration
Delaware Department of Transportation
800 Bay Road, Dover, DE 19901

2. **Specific Type Firm Solicited:**
   There is no pre-registration requirement in order to submit an expression of interest on this project. The selected firm(s) may be required to register upon selection.

3. **The Consultant shall submit six (6) copies** of an Expression of Interest. Receipt of insufficient copies of the Expression of Interest and non-compliance with providing the requested information in the desired format may result in elimination from the overall shortlist and selection process.

4. **Joint venture** submissions will not be considered.

5. **DelDOT reserves the right to reject** any and all Expressions of Interest. All submissions become property of the Delaware Department of Transportation and shall be retained for a period not to exceed 30 days from the date of the approved shortlist. DelDOT reserves the right to any and all ideas included in this response without incurring any obligations to the responding firms or committing to procurement of the proposed services.

RATING CRITERIA

Major factors/criteria for the establishment of a reduced candidate/shortlist and selection:

a) Key Staff/Project Team qualifications pertaining to actual achievements of similar projects of the proposed project team. (to include sub-consultants, if applicable)
b) Firm resources/capability to assist project team as needed (for example: interfacing the fare collections system technology and related data system with the organization's bus technology and computer data information system and network, designing an interfacing program with the spectrum of employee groups for input and implementation of training, new procedures, evaluations, etc.)
c) Problem evaluation and problem solving techniques, experience, and related resources (re: technology, people related, contractors, etc.)
d) How well the combination of experience, resources, problem solving capabilities and technical skills will best serve DTC's needs for this project.

NOTE: DelDOT maintains a strict policy of not providing a debriefing for those candidates that do not make the shortlist. Shortlist and Selection Committee membership appointments are confidential.

QUESTIONS

Questions regarding this RFQ should be submitted via email. Questions received and the Department's response will be provided on the Department's web site; http://www.deldot.gov/. Click on 'Doing Business', under 'Professional Services', click on 'Current Requests for Consulting Services'.

CONTACTS

Questions concerning submissions and procedures may be obtained from: James Hoagland, Consultant Control Coordinator, Telephone: (302) 760-2036. E-mail address: jim.hoagland@state.de.us.

OVERVIEW OF SELECTION PROCESS

The Expressions of Interest will be used to determine a reduced candidate's list/short list and also will be used for reference material during the actual selection process. Once a short list has been determined, a mandatory pre-proposal meeting may be established for a briefing and provides an opportunity for the short-listed candidates to ask questions. Once the Pre-proposal Meeting has been completed, there may be a written submission and/or oral interview sessions scheduled, after which the committee will determine the successful candidate.

After the selection process has been completed, applicable price information will be requested from the successful candidate; i.e. salary rates for various classifications of personnel, an indirect cost derivation for the most current accounting period, and a schedule of rates for other direct costs. If an interested firm is requested to submit a priced proposal, the proposal should substantially reflect the same composition and area of involvement as the Expression of Interest submission.

Payroll burden and overhead will be computed on direct salary costs only (not including overtime) at the consultant's audited rate, as per Federal Acquisition Regulations Part 31, and Department policies. Computer and CADD costs are not allowable as a direct cost to this project. Rate determination and applicability is subject to audit by the Department. Additionally, candidates should be prepared for the Department to work with your current accounting firm to provide information and backup documentation. Full and immediate cooperation is required to avoid delays in execution of an agreement. Failure to cooperate may result in breaking off of negotiations and moving to the next ranked firm.

EXPRESSION OF INTEREST REQUIREMENTS

The letter portion of the Expression of Interest shall indicate the firms desire to perform services and indicate the specific tasks or areas of expertise, which will be subcontracted, and to whom. Interested firms must submit the material required herein or they will not be considered for the project.

1. Please submit the firm’s mailing address, phone number, and an e-mail address for the firm's point of contact person on page 1 of the Letter of Interest. Future contacts by DelDOT will be done via e-mail, whenever possible.

2. The Expression of Interest submission should be tabbed and collated in the following order:

A. Table of Contents

Table of Contents (1 per set) - Limited to One (1) page on 1 sheet of paper

B. Letter of Interest

Letter of Interest (1 per set) - Limited to four (4) pages on two (2) sheets of paper

Indicate the following:

(1) An understanding of the anticipated assignments, services required, and approach to providing the services required

(2) Identify who the proposed project manager will be and what office location they will be working from.

(3) The location, size, and description of the firm

(4) Availability of personnel for immediate placement

(5) Sub-consultant usage if anticipated**.** Indicate the percentage of work estimated to be performed by the sub vs. the prime. Also, indicate if the prime consultant has previously worked with the proposed sub and give a brief example of the previous relationship(s).

(6) The Prime/Lead consultant must indicate the present workload either as a Prime Consultant or a Sub-Consultant with the Delaware Department of Transportation by Location, Agreement No. (to include Supplementals), Total Dollar Upset Limit, total paid-to-date, and the amount still available for use on the project(s). Also, include the estimated date of completion. If possible, include the estimated fees for any Delaware DOT projects for which your firm has been selected and does not have an executed agreement in place.

(7) Provide a listing of contracts with DelDOT for the past five (5) years. Clearly indicate if your firm has not been short listed for a DelDOT project within the past five (5) years.

C. Project Organization Chart

Project Organization Chart (1 per set) **-** Limited to one (1) side of one sheet of paper.

D. SF 255 or SF330 Forms or "Substitute for SF 255"

U. S. Government Form 255 or 330 (1 per set) - "Architect-Engineer & Related Services Questionnaire for Specific Project".

Instructions for completing the SF 255 form:

(1) **Item # 4,** Personnel by Discipline, the consultant shall document clearly personnel by discipline presently employed at the work location proposed and their availability for assignment to this project.

(2) If more than one (1) location is being proposed, the consultant must clearly document all locations proposed and show the total number of personnel by discipline for all locations proposed.

(3) **Item #7, Key Staff,** is limited to eight (8) individuals who are expected to spend a significant amount of productive time on the project. Staffing information can be either shown as two (2) individuals per page/sheet, or one (1) individual per page/sheet. Resume information presented may pertain to individual(s) that is/are not connected with the Prime/Lead consultant. It should be clearly noted what the affiliation is for any SF 255 resume information submitted other than for the Prime/Lead consultant firm. Resume information is limited to eight (8) individuals regardless of affiliation. Experience listed should be limited to that within the last five (5) years.
If the proposed project personnel have been with the lead firm for less than one (1) year, indicate the name(s) of the previous employer(s) and the length of employment with the previous employer (s) for the last five (5) years.

(4) **Information for Item #8, Similar Projects,** shall be limited to five (5) similar projects and shall not exceed one (1) page in length.

(5) **Information for Item #10, Additional Information**, shall not exceed one (1) page.

Instructions for completing a "Substitute SF 255":

(1) Submit the following packet of information titled "Substitute for SF 255" to include:
  (a) Name of entity and address.
  (b) Name, Title, Telephone Number and e-mail address of Contact Person.
  (c) Address of office where work will be performed.

(d) Names & Addresses of any sub consultants, if applicable. Indicate if the prime consultant has worked with the sub consultant previously.

(e) Resumes for 6 key persons (6-single sided sheets of paper for resumes – 1 resume on each sheet). Indicate if the individual is a full-time member of your firm, part-time, on-call, etc. Indicate where key personnel are currently assigned & the length of the assignment. Clearly identify who will be the Project Manager.

(f) List 5 projects that your firm has participated in within the last 3 years that are similar to the requirements in the Project Description portion of this Request for Services. Include project name & location, nature of responsibility, contracting agency & address on one-single sided sheet of paper maximum.

(g) Additional information limited to 1-single sided sheet of paper.

NOTE: Interested parties may submit either a SF 255 or a "Substitute for SF 255" as prescribed above. CANNOT SUBMIT BOTH OR INTERMINGLE THE FORMS.

E. SF 254 Forms (not necessary if substitute used for SF 255 or if SF 330 is used)

U. S. Government Form 254 (1 per set) **-** "Architect-Engineer & Related Services Questionnaire" (include a separate SF 254 for each sub consultant proposed).

F. References

Provide a list of References who have personal knowledge of the prime consultant's and the sub-consultant's previous performance on related projects. Provide three (3) client references each for both the prime and the sub-consultant(s). The references must include **verified** addresses and telephone numbers, contact persons, and a brief description of services that have been provided similar to those described by Delaware DOT for this project.

(1) References shall be shown on separate sheets (limited to one (1) single-sided sheet; one sheet for the prime and one sheet for each sub proposed). These shall not be included in the four page Letter of Interest.

No promotional materials or brochures to be included as part of the Expression of Interest package.

The Department is not liable for any cost incurred by the consultant in the preparation or presentation of the Statement of Qualifications.

The Department of Transportation will affirmatively insure individuals and businesses will not be discriminated against on the grounds of race, creed, color, sex, or national origin in consideration for an award. Minority business enterprises will be afforded full opportunity to submit bids/proposals in response to this invitation.

Department of Transportation
State of Delaware
By: Carolann Wicks, P.E.
Secretary
Dover, DE
October 1, 2007

SCOPE OF WORK
FARE COLLECTION CONSULTANT

Phase 1- Needs Analysis

Inventory and Evaluations

1. Inventory existing Fare Collection System (job descriptions, functions, and responsibilities; procedures, documentation, training, equipment, fare media and fare related equipment inventories, maintenance programs, sales, fare collection, deposits, security, obtained data, software, reconciliation, other data requirements, interface with other data systems, resolving related customer problems, etc.) by DTC site and related DTC off site locations (private contractors of service, rail stations, retail sales, etc.) for fixed route bus, rail and paratransit services.
2. Evaluate existing systems, cost, effectiveness and the opportunities for improving cost effectiveness of the system and its derived satisfaction (dependability, ease and convenience of use, etc.) with customers and employees involved in the system.
3. The initial system for fixed route service will be a cash validation, magnetic stripe card system with capabilities designed in the hardware and software for replacing the higher volume, multi-day magnetic stripe stored value cards with contactless smart cards within 5 to 10 years (in conjunction with similar actions of neighboring transit systems). For cash and DARTCard fare options see www.dartfirststate.com/fares/. Since cash validation cannot handle individual paper tickets, a new fare media for the mentally challenged (who tend to lose higher valued, multi-ride fare instruments) will need to be recommended.
4. Define the existing and recommended fare collection process for both fixed route and paratransit services, with a listing of new features that may improve or alleviate current issues involved in fulfilling the existing fare structure media components for fixed route and any need for changes in paratransit fare operations and structure (be aware that the potential exists for additional paratransit rates to be established for non-complimentary ADA service customers);
5. Incorporate flexibility in new system to change rates and types of fare options to meet future, unknown revenue and customer requirements
6. Evaluate fare media requirements for today and the foreseeable future plus alternative technical options for security, minimizing operator involvement, operational costs, service evaluation and customer satisfaction (i.e. cash validation, change cards, AVL calculated zone distance; universal operator identification input [operator id, route, run numbers] for integration with farebox, CAD/AVL, APC, overhead signs, voice annunciator, etc. and data by route, trip, bus stop, etc.).
7. Identify needed changes in hardware and software for all phases of fare sales, collection, reconciliation and reporting including memory limitations for multiple zone rate combinations, bad card lists, etc.
8. List appropriate alternatives with potential capital costs, recurring operating costs and benefits to DTC. Make recommendations for changes and alternatives based on current available technologies or current state-of-the-art transit industry fare collection system and expected future direction as determined by DTC.
9. Identify transitional issues for inclusion where appropriate in Phases 2, 3 and 4 such as warranty issues (time frames, disposable versus repairable parts, process and time restrictions associated with a warranty claim, etc.), asset tracking of old versus new parts and equipment, storage requirements and environment for new parts and equipment, disposal of unusable old parts and equipment, security procedures from procurement to storage to issue, changes in training requirements, updates in manuals with each change

or upgrade in equipment or software, etc.

10. Consultant will arrange for industry supplier presentations as needed for above.

Decisions

1. Based on the above information, develop a list of key decisions with related pro and con information to aid decision making that will be needed prior to proceeding with the implementation plan.
2. The decision list should include: the personnel, equipment and procedure structure requirements of the new fare collection system (from media specifications and procurement, inventory, distribution, sales, utilization in fare collection equipment, maintenance of equipment, cash removal, data transfer, cash transfer to bank, security, back office data analysis and reconciliation and related customer service); fare media (including whether photo id is needed on Senior/Disabled Cards or card activation at time of sale); level of security; interagency applications for joint procurements and/or card usage with neighboring transit systems; changes in vehicle operations, fare sale procedures, etc.; technical options including back office and sales software/hardware and compliance with adopted technical architecture; the on-going system support requirements (including customer service and related customer support locations); and the cost effectiveness and feasibility of the recommended resource requirements for the recommended provisions within the system.
3. The Project Manager will advise the consultant on any situations that may occur, as soon as practicable, that could require a change in the sequence for implementing tasks. Ultimately the project manager will review, revise and approve the timeline and its related tasks for this project.

DTC Support

1. DTC will provide appropriate related data and relevant information it has in its possession to the consultant for this project as needed as long as it does not violate legal mandates, contracts or disrupt its operations, etc.
2. The consultant throughout this project will coordinate and obtain prior approval through the DTC project manager for any requested information, personnel requirements, etc. needed from DTC.

G. Deliverables

Provide activity reports via e-mail at least once each month during Phase 1 document activities. Prepare draft and final presentation materials summarizing evaluation results for decision makers. After Phase 1 is concluded and decisions have been made, prepare a final report to document Phase 1.

H. Meetings

1. Compensation for requested meetings will be negotiated.
2. By making use of e-mail and telephone, we expect to minimize the needed meetings in each phase of the work.

Phase 2— Implementation Plan

Based on the outcome of the decisions listed above, the implementation plan phase will develop a strategy and schedule for implementation of a integrated fare collection system. The implementation plan will contain everything necessary for successful implementation and operation of the new system, including provisions for differences in fixed route and paratransit. The following elements are examples only and should in no way limit or restrict the consultant in listing appropriate requirements for implementation and operation of the new system:

1. Facilities and Equipment: Listing of facilities and equipment that will be required to implement the fare system. This list may include on-board fareboxes, fare media vending and validating machines, change machines, sales equipment for encoding and vending at sales outlets, maintenance and repair equipment, with any variations that may be needed with off-site private bus service contractors (minimum infrastructure at contractor sites since contractors can be changed frequently) etc. This element should also include any facility modifications that might be required for fare sales, revenue collections and/or compliance with regulations (i.e. federal ADA regulations).
2. Fare Media: Listing of changes in fare media that would be required to implement the fare system. Identify type, specifications, verification testing procedures for determining if received media meets specifications, handling and distribution procedures from inventory to sales, cost effectiveness of providing customer protective sleeve for card to lessen damage caused by customer; trouble shooting procedures for determining if media transaction failure is due to the card media, customer abuse or a faulty farebox; and recommended policy, from driver to customer service, on how to service customers with faulty fare media and the related hardware, software and personnel required for this policy. This list should also include suppliers and pricing.
3. Costs: Estimate costs of staffing, training, equipment, and facility modifications necessary to implement, operate, and maintain the new fare system, including effects on operating costs due to changes in average dwell time. Identify staff functional responsibilities. List staff positions and skill levels needed to implement and maintain the fare system. This list should be compared to existing staff resources to determine changes in staffing requirements. Staff requirements should also include special training that would be necessary to administer the fare system and maintain the fare collection equipment. Besides initial training, include also refresher training and new employee training during the life cycle of the system.
4. Policies and Procedures: Identification of fare policies and operating procedures that would need to be changed to implement the new fare system.
5. Transition Strategies: Determination of the need for and ultimate recommended strategy to convert from existing fare media and sales to new fare media and sales processes. Transition should be done with minimum of confusion and disruption for both DTC employees and customers.
6. Fare Sales, Customer Service and Installation Equipment: Work program and schedule for design, procurement, installation, testing, training, operation, and follow-on tasks necessary for the new fare system. This work program should include schedule for phase-out of old equipment and phase-in of the new equipment along with any overlap.
7. Institutional Agreements: Institutional agreements that may be necessary to integrate the fare structure with other (connecting) transit agencies or with other agencies for which DTC has group fare programs.
8. Legal Requirements: Other actions that may be required to insure that enforcement of the fare system complies with applicable federal and state laws and regulations, the Americans with Disabilities Act accessibility requirements, and other actions that would reduce DTC's exposure to liabilities associated with use or misuse of the new fare system.
9. Performance Monitoring: Prepare a performance monitoring program that would track fare sales, system usage (ridership and revenue) by fare category, time of day, day of week, route, geographic location and transfer matrix with other routes by a specific fare category or for all fare categories between specified routes for specified days, etc. Include performance-monitoring program for fare equipment, fare media types, fare media failure by production lot and sales outlet, mean time between failures by component, failures on buses current with preventive maintenance program and those that are not, tracking of warranty components, and servicing requirements. System must be flexible but effective

to handle private bus contractor locations and related revenue security without significant on-site infrastructure.

10. Deliverables: Provide activity reports via e-mail at least once each month during Phase 2 to document activities. Provide a written implementation plan including the above elements and appropriate timelines for implementation.
11. Meetings: Define criteria for meetings.

Phase 3— Farebox System Procurement

The consultant will aid DTC in investigating and initiating a contract with a farebox vendor. The contract for fare collection equipment will have utilized an open, competitive procurement process that fulfills FTA regulations and is compatible to Delaware law and current industry standards. The resulting contract with DTC should produce a significantly lower per unit cost then what was budgeted for DTC along with full capabilities for fast cash handling and verification, magnetic stripe read/write dip and swipe systems, smart card readers and encoders, appropriate bus operator information screens and key pads, revenue data security, data processing and reporting, maintenance, parts, diagnostics and related testing equipment and compatibility for linking with a future on-vehicle smart bus technology system, etc. The consultant will do an evaluation on:

- What may be needed in the resulting contract with the farebox vendor
- What items should be purchased
- Items for an in-house testing laboratory to verify accurate functionality of fare media, media recognition by farebox, software programming, reporting, etc.
- Whether any adjustments may be needed in the elements contained in the contracted data system for need fulfillment and the related compatibility requirements with the DTC data system
- What provisional requirements will be needed to connect the fareboxes to a future bus technology platform that currently does not exist on DTC buses and has not yet been selected or acquired by DTC. The means to insure that dependences on such a connection is an on, off option, not a requirement. If connected the farebox must have the capability to operate on its own if the connecting technology platform malfunctions in a manner that could conflict with the farebox operation.
- What may be necessary in the compliance testing of equipment and software defined in the contract
- Plus other related actions that may be needed to initiate or administer the resulting contract with the farebox vendor

If the farebox vendor is selected from another agency's contract, a review of the provisions included in the other agency's contract and the actual to-date experience of the agency that initiated the contract should include:

1. Equipment Differences: Identify what equipment and software DTC needs that is different or requires a variation to what is listed in the original contract of the other agency. For instance, DTC will require smaller, portable fareboxes for use in its smaller buses operated by contractors (to enable the boxes to be transferred to other vehicles if a warranty issue results in vehicles being sent to a regional dealership for a period of time). The small paratransit "Go Link" buses (which operate in both door-to-door paratransit and scheduled fixed route bus stop pick-up modes) also need special boxes that can be placed in a manner that does not block the bus operator's sight lines. The DTC Directors want smart card readers to be placed in the DTC parking facilities located at its rail stations that could be used for payment of both parking fees and SEPTA R2 train trip fares with a future smart card.
2. Fare Equipment Description: Provide quantity and description of fare vending/collection

units (by component type). Provide description and quantity of ancillary units for maintenance and repair, fare sales (encoding), enforcement, monitoring of status, data collection and processing. Provide specifications of the fare media that will be sold and accepted by the fare appropriate fare equipment. Indicate what will be included for fixed route buses and what should be utilized for paratransit and "Go Link" vehicles.

3. Needed Spare Parts: List the projected spare parts with their related quantities needed for this project through the warrantee period.
4. Employee Feedback: The consultant will design and conduct group discussions with employees whose duties include fare collection (or will include fare collection in the planned future scenario). Focus group members will be given an opportunity to interact with and comment on the same fare collection equipment that is being purchased or is under consideration for purchase. This information will help determine if there is a need for any changes in layout, function, etc. that relates to the equipment.
5. Design Criteria: Describe physical characteristics, human interface factors, accessibility characteristics, environmental factors, electrical and electronic interfaces, regulatory requirements (federal ADA requirements, etc.), data transmission and communications protocols, reliability requirements, maintenance and servicing requirements of fare vending/collection equipment. Variations needed for off-site locations must be recognized. Portability of equipment for private bus service contractors and paratransit service, etc. must also be presented.
6. Data Processing Requirement: Describe data collection, storage, processing and transmission systems, including the (relational) database management system. Specify data transmission and communications protocols between remote units (for example fare vending machines, on-board fareboxes, hand-held fare inspection readers or data transfers from non-DTC sites such as by contract operators of bus service) and the central computer system. Specifications will include software requirements for compiling fare transactions into reports for fare payment collection, passenger counts, and reconciliation of customer complaints due to equipment malfunctions or fare payment disputes. Describe other changes needed in the system. Systems must be compatible to DelDOT ITS Architecture (or make a case as to why DelDOT's ITS Architecture should be adjusted to include this technology) and able to be maintained by DelDOT's OIT section.
7. Functional Requirements: Provide description of cash, credit cards and fare media (including magnetic or electronic stored value cards) to be accepted. Describe specifications for registering/counting capabilities, card reader system, information displays (visual and auditory), operating status indicators, maintenance status communications, transaction rates, patron information graphics, patron interaction buttons, patron warning notices, coin/ticket/bill handling systems, credit/debit bank card subsystem, ticket issuing system, power systems and interfaces, manual bypass systems, electronic communication protocols, security and safety devices. All systems must comply with the Americans with Disabilities Act requirements and with applicable federal, state and local codes, ordinances, and regulations applicable to public used fare collection/vending machines. Transitional capability must be built into the system so that as much as possible current fare media can continue to be used in the fareboxes with appropriate data still being recorded. For those items that may no longer be able to be used, such as paper tickets, a transitional plan on what media will replace the current fare media must be developed in a manner that will minimize confusion and inconvenience to the customer.
8. Central Data Collection and Reporting System: Describe specifications for information processors, event recording, data storage equipment, data transmission and receiving equipment, data archiving, computer hardware and software (including operating system), data transmission protocol, configuration of data files, query and reporting formats, error logging, system restart and recovery characteristics. Systems must be compatible to DelDOT ITS Architecture and able to be maintained by DelDOT's OIT section. If

equipment is available for retail sales terminals via dial-up telephone connections, provide specifications for that equipment.

9. Installation Interfaces: Identify duties performed by equipment contractor and by DTC and/or DelDOT OIT for the installation of the fare collection system. Physical installation of equipment into buses shall include securing units on-board, connection of power supplies, data cables, and connection to on-board computer controllers (if applicable). Identify special issues and needs for private bus contractor site locations. Installation will include testing and verification that unit is functioning properly for all transaction types and appropriate remedies for failed units.
10. Security Systems: Describe system process and control measures for allowing authorized entry (servicing and maintenance) and for providing an audit trail for bad listing invalid cards, cash transactions and cash removal. Describe requirements for alarms and communications of intrusions or conditions of degraded operations for all equipment. Describe procedures and systems to check for counterfeiting and fraud.
11. Service and Maintenance interfaces: Specify service indicators, access requirements, diagnostic testing capabilities and servicing process for each type of fare collection equipment.
12. Operating Environment: Specify operating environments for fare collection equipment and fare media including maximum and minimum temperatures, precipitation, humidity, wind, voltage range, power frequency range, vibration and shock.
13. Maintenance: Identify appropriate preventative maintenance requirements for fare collection/vending equipment, the anticipated annual operating costs for parts and labor of this program (based upon year 2008 costs), the projected future unavailability of parts required for the preventative maintenance program and the expected life or period when the equipment will need to be replaced. Include known factors with regards to variation in operational and geographic area issues with the DTC system (higher humidity at ocean sites, lack of full service on-site maintenance and inventory at private bus contractor sites that require added expense to have equipment sent to DTC facilities or DTC maintenance personnel and related equipment sent to contractor's site, etc.).
14. Materials and Workmanship: Provide description of materials and tolerances to be used in manufacturing cabinets, mounting brackets, mechanical components, electrical and electronic components, fasteners, wiring and cables. Where possible, ISO standards (e.g. ISO 14443) will be used.
15. Inspection and Testing: Develop schedule for configuration inspection at appropriate points in the design and production of the fare collection units. Prepare a schedule for testing of first article unit and each subsequent unit both prior to installation and after installation. Develop test objectives, procedure and tolerances for each sub-component system. Prepare a schedule and procedures for final acceptance testing. Describe requirements for contractor quality assurance program. Testing of the accuracy of software reporting is also required.
16. Training: Determine staff training requirements before, during and after the installation and testing phase. We expect that the equipment vendor system integrator will be required to use a train-the-trainer" approach to provide training programs for all staff, including maintenance, fare sales and vehicle operators. Training requirements must be met before the system is accepted.
17. Product Support: Describe requirements for contractor technical support, both on and off the site, after installation and testing of electronic fare collection units and data collection software and hardware. Specify requirements for manuals, parts catalogs, diagnostic and testing equipment, special tools and spare parts.
18. Deliverables: Provide activity reports via e-mail at least once each month during Phase 3 to document activities. Develop a complete set of specifications for fare collection equipment to be installed or modified. Specifications will include all ancillary equipment required to service and maintain the fare collection units such as special tools, diagnostic

testing equipment, software, and an initial complement of spare parts and units and training. Specifications will also include requirements for warranties on fare collection units and associated equipment.

19. Develop a Schedule and Timeline for the above through the Warrantee Period along with an appropriate achievement payment schedule to the vendor.
20. Meetings: See last item under Phase 1.
21. Support Procurement Process: Includes proposal evaluations, participation on selection team for the farebox vendor, design reviews, technical analyses, qualitative analyses, price and/or cost analysis, negotiations (if appropriate), interviews, and other related activities to achieve contract award. DTC may procure equipment and systems using a negotiated procurement method.

Phase 4—Oversight and Compliance

1. Project Management Services: Review vendor's proposed implementation plans, test plans, and schedules, and advise DTC on their acceptability. Monitor vendor's performance. Coordinate between vendor and DTC personnel involved in installation and training. Inform DTC of problems and recommended solutions.
2. Resident Engineer Services: Monitor pre-installation testing, installation, and post-installation testing, to ensure that the manufacturer(s) is in compliance with the contract terms and conditions. (Pre-installation testing and first article testing may occur at the manufacturers assembly facility.) Review manufacturers maintenance of configuration records and quality control procedures. Maintain a punch list" of corrective items and/or deficiencies that the manufacturer(s) must remedy before final acceptance of the fare collection units. Compliance testing will include required fare media for project. Develop testing procedures, conduct initial testing and train DTC personnel on how to verify that the related equipment and fare media is functional and meets all specifications.
3. Contract Change Orders: Review and evaluate any change orders that may arise. Advise DTC project manager as to whether the change order is warranted and valid. Advise DTC project manager on whether proposed cost is acceptable.
4. Deliverables: Provide activity reports via e-mail at least once each month during Phase 4 to document activities. Provide reports more frequently as needed to highlight problems and recommend solutions. Provide a final test report and recommendation on acceptance.
5. Meetings: See last item under Phase I.
6. Warrantee Assistance: Provide assistance as needed on a time basis to resolve issues related to the project during the Warrantee Period to determine if problem is internal, involves the contractor, and/or provide the help required in developing a resolution to the issue at hand.
7. Post Warrantee Assistance: Provide assistance on an as needed basis concerning on-going technical issues, disputes with the related contractors and/or other issues the consultant was involved in related to this RFP. Compensation will be at the hourly rate agreed upon as part of the contract resulting from this RFP for up to two years beyond the life of the warrantee period.

- END -